Triennial Review of R. 61-68 *Water Classifications and Standards*
Overview of Stakeholder Comments Received on the
January 26, 2007 Notice of Drafting and Responses from the South Carolina Department of Health and Environmental Control (Department)
May 4, 2007

A total of 14 written comments were received. When multiple comments were received on the same issue, we addressed those as one. Otherwise, the comments have been divided according to who sent them. A brief summary of the comments is provided below.

1. Revisiting the Arsenic Criteria for consumption of water and organism and organism only.

Commenters included: Santee Cooper, Duke Energy, SC Chamber of Commerce and SCANA.

Many comments were received recommending that the Department address this issue. Some comments included technical information explaining why South Carolina should revise the arsenic standard for Human Health, but maintain the MCL of 10 ug/l.

Response: ***The Department is reviewing the arsenic human health criterion and the underlying scientific basis for the federally published numeric recommendations by the U.S. Environmental Protections Agency (EPA) under the Clean Water Act. The EPA has published its intention, and our current water quality standards include a footnote to this effect, of reevaluating the basis for the water and organism and organism only arsenic criteria. The Department is proposing to remove of the water and organism and organism only numeric values while retaining the drinking water MCL until such time as the EPA has completed its review of the scientific basis and publishes an appropriate protective water and organism and organism only criteria.***

2. Review and, where appropriate, adopt the revised Federal Water Quality Criteria to reflect the most current final published criteria put out by the EPA.

Commenters included: Savannah River Site, SC Chamber and SC Water Quality Association

Several comments were received recommending that the Department address this issue. However the Department was asked to review the scientific basis for the proposed criteria before adopting them “at face value.”

Response: ***The proposed changes to R.61-68 relating to human health and aquatic life criteria are reasonable because the stated criteria in the amendment are based on sound scientific principles and are required in order to comply with the goals of Section 101(a)(2) and 303(c) of the CWA for protection and maintenance of the uses of the waters of the State. These proposed changes include incorporation of the revised recommended water quality criteria for 15 pollutants published in the Federal Register on 12/31/2003. These revised criteria***

are based on EPA's 2000 methodology for deriving human health water quality criteria. The Department also proposes to add the new non-priority pollutant criteria for Diazinon and Nonlyphenol to the standards. The commenters are asked to submit any additional data or studies they would like the Department to review related to these proposed standards

3. Site Specific DO Standard for portions of the Savannah River/Harbor.

Commenters: SC Water Quality Association, SC Manufactures Alliance

Comments were received recommending that the Department address this issue. The Department is asked to "proactively seek to address impaired waters ahead of TMDL development" and cautioned that a "new dissolved oxygen standards will directly impact loading on the Savannah River."

Response: This issue is still being addressed through internal meetings with the EPA, the Georgia Department of Environmental Protection and through the stakeholder process with dischargers to the Savannah River.

4. Review and, if appropriate, revise the assessment of the bacteriological indicator for Protection of Recreational Uses

Commenter: SC Water Quality Association,

One comment was received recommending that the Department address this issue. The commenter asks that the Department move away from using a single sample value to assess whether recreational waters are meeting recreational standards.

Response: The present water quality standards for Enterococci for wastewater dischargers in Class SA, SB and SFH waters allow for the use of a daily maximum limit in place of a single sample maximum value. With regard to the assessment of recreational waters, we are continuing to evaluate whether the suggested recommendation would be appropriate.

Catawba River TMDL Coalition:

1. Asks the Department to revisit the numeric nutrient criteria for lakes that were adopted in 2001, and revise in a manner that reflects localized conditions and protects designated uses.

Response: As the commenter noted, just prior to the 2001 triennial review of the water quality standards, the EPA published a methodology for States to utilize in development of numeric nutrient criteria. The Department reviewed EPA's recommendations and then modified the federal approach and utilized only data collected locally on our State's reservoirs for the development of the current numeric nutrient criteria for lakes. These existing water quality standards reflect localized conditions and while they may be significantly less stringent than any numeric criteria would be if developed based solely on the national database and

following strictly to the EPA guidelines without modification, they are still protective of the designated uses. While the development of numeric nutrient criteria for other waters of the State is still ongoing, we are not yet ready to promulgate any specific values at this time.

2. Asks that the Department defer developing numeric nutrient criteria for other types of waterbodies until it has established scientifically defensible methods and data protective of specific designated uses. Two technical documents were included with their response.

Response: The Department appreciates this comment and agrees that scientific defensible methods and data protective of designated uses should be utilized in the development of numeric nutrient criteria for all waterbodies. The Department will review the technical documents provided by the commenter as numeric nutrient criteria are developed.

SC Water Quality Association:

1. Asks the Department to revise the provision calling for five consecutive fecal coliform samples in a 30-day period to a minimum of five samples during a 30-day period.

Response: This language has been in the Standards since 1971 and the Department finds that the current language is protective of water quality. The Department is still evaluating if a change to this language will be less protective of water quality. Please provide more information on why this change is requested.

2. Asks the Department to clarify the Enterococcus standard so that only the geometric mean will be used for NPDES permitting and water quality assessment purposes while the geometric mean and upper percentile values will be used for beach management decisions.

Response: Federal permitting regulations (40 CFR 122.45.d) require that NPDES discharge limitations include a daily maximum limit for all discharges other than publicly owned treatment works (POTW's), and an average weekly limit for POTW's. In addition, the current water quality standards call for calculated monthly average and daily maximum limitations for bacteriological pollutants. The procedures outlined in the Technical Support Document for Water Quality Based Toxics Control (EPA/505/2-90-001) would be used to establish the appropriate daily maximum or weekly average limits in the absence of a specified daily maximum water quality standard. In evaluating this commenter's recommendation, the Department has reviewed several existing permits and found that in most cases, a more stringent permit limit would result if we removed the language as the commenter proposes. Since the current language contained in the water quality standards is protective of human health while not being overly burdensome to the regulated community, we are continuing to evaluate whether the suggested recommendation would be appropriate.

3. Asks that section E.14(c)(8) be modified to say, “no more than ten percent of the monthly samples can exceed 43 mpn.” Currently 43 mpn is a daily maximum number for calculation permit effluent limitations.

Response: ***The Department interprets this section to allow “no more than 10 % of the monthly samples to exceed 43mpn,” subject to antibacksliding and antidegradation review.***

4. Asks that the Department clarify the flexibility to use flow-based and other permitting strategies that better reflect actual discharge conditions rather than assumed worst-case scenarios. Recommends use of lowest average daily flow in receiving stream for saltwater dischargers and/or actual flow in receiving stream for stormwater discharges.

Response: The Department does use critical flow conditions to approximate magnitude, duration, and frequency for permit conditions. The critical flow condition is not a “worst case scenario,” but a design basis developed for use with the acute and chronic criterion. Use of the average daily flow for saltwater dischargers is not protective of the acute water quality criteria. The Department already is using the flexibility in the standards to utilize flows other than 7Q10 on a case-by-case basis.

5. Asks that the Department establish a “safe harbor” for expansions of public facilities that have (1) gone through Council of Government review and approval and (2) would not increase pollutants by more than 25 percent of the remaining assimilative capacity of the stream in question.

Response: Please describe what is meant by “safe harbor” in this context. Item 2 does not take antidegradation into consideration. Allowing an increase would have to be evaluated under those provisions for each discharge.

6. Ask that the Department clarify that the 0.1 rule only applies when a stream actually experiences low DO.

Response: ***There is a contested case before the SC Supreme Court that will have implications related to this question. Response is deferred.***

7. Asks that some reasonable limitation should be put on ambient biological testing required from regulated entities.

Response: The commenter cites Section E.15 of the standards. This section of the standards does not actually use the word “ambient”. The Department requires ambient biological testing of NPDES dischargers on a limited basis, so we are seeking clarification of the issue from the commenter.

8. Asks that the rule that unclassified waters take on classification of down stream waters be modified such that discharges to unclassified waters should not interfere with downstream-designated uses and criteria.

<u>Response</u>: The Department would like more information on the particular concerns of the commenter. Unnamed waters are still waters of the state and their uses must be protected.

9. Recommends that Section E. 14 be revised to be consistent with language in E.14 (5) concerning EPA criteria.

<u>Response</u>: The Department is reviewing this section of the standards to determine if it needs to be clarified. The Department is also conferring with the EPA on the implications of making a change to this section of the standards. The intent of the sentence in question is to indicate that the entire published criterion is adopted into the standards, not just the numeric criterion.

10. Asks the Department to consider additional water classifications such as "swamp water" and "urban streams."

<u>Response</u>: These waters are currently classified. The commenter is asked to provide data that documents the need for these new classifications.

11. Recommends a change to the language concerning alternative WET testing species or methodology.

<u>Response</u>: The EPA must approve any alternate WET testing species or methodology. The NPDES permitting process also addresses this issue.

12. Recommends that the ONRW section that specified that no new or increased sources of pollution are allowed be refined to require no measurable change in water quality.

<u>Response</u>: State water quality standards must be consistent with specific Federal statutory and regulatory requirements in order for the EPA to authorize their use for water programs in that State. Consistent with the Federal regulation at 40 CFR 131.12(a)(3) with regard to antidegradation and the protection of nationally significant ecological water resources of the State, ONRW waters are our most protected waters and degradation of any existing water quality is not allowed. Our current state water quality regulation protects these unique waters and is consistent with Federal requirements

Duke Energy

1. Comments that the Source Water Assessment and Protection Program has not been promulgated in compliance with the APA, and therefore should not be used to impose NPDES permit limits/conditions.

<u>Response</u>: The Department will soon be issuing a new Notice of Drafting that will address Source Water Protection clarifications to the existing regulation language.

2. Asks for clarification that a NPDES permit applicant can perform a mixing study as a means of establishing an NPDES limit(s) for discharges to lakes.

<u>Response</u>: This is currently allowed in the standards. Please indicate what needs to be clarified in the standards.

3. Comments that non-contact cooling water should not be subject to the water quality standards for toxic pollutants (with the exception of biocides and temperature).

<u>Response</u>: A discharge of water where the pollutant concentration has been changed must adhere to the water quality standards in order to be protective of water quality.

Summerville CPW - Mr. Charles Cuzzel

1. Requests a new Classification and Standard be developed for the upper Ashley River. Comments that the standards do not include an appropriate category for coastal rivers that are heavily influence by freshwater swamps. Suggests as an initial step that the upper portion of the Ashley be reclassed from SA to SB.

<u>Response</u>: The commenter is asked to submit data to support this change. The Department will review the reclass request and supporting documentation.

Progress Energy

1. Asks that the water quality numeric criteria for the protection of aquatic life for copper be modified using the biotic ligand model (BLM) as recommended in the 2007 copper criteria revision.

<u>Response</u>: The biotic ligand model can currently be utilized as a scientifically defensible method for determining effluent limits. The Department proposes to clarify that the BLM can be used by adding a footnote to the freshwater aquatic life criteria for copper.

Western Carolina Regional Sewer Authority

1. Submitted copper data to be considered for removing a portion of the Reedy River from the 303(d) list of impaired waters.

<u>Response</u>: Data was forwarded to the 303(d) coordinator for consideration.

The Beaufort Group – Mr. Bob Gross

1. States that it seems that reclaimed water, which has a very high treatment standard should be allowed to be discharged into ORW waters. Alternatively, the discharge of stormwater from any developed area should be banned to ORW waters.

<u>Response</u>: Stormwater is only allowed to ORW "If water quality necessary for existing and classified uses shall be maintained and protected consistent with Antidegradation Rules". Stormwater from developed areas must demonstrate compliance with the condition quoted above before being allowed into class

ORW. The Department appreciates the comment and is also concerned with maintaining the water quality of ORW.

Washington Savannah River Company (WSRC)

1. Requests that the definition of ephemeral stream be refined to enable better identification through the use of biological indicators. Suggests the Department use scientifically defensible biological data for the development of the indicators.

Response: The Department would like more clarification of the issue. Please provide suggestions as to what would refine the definition with the understanding that the Department intends to protect ephemeral streams to the same degree as other waterbodies of the State and to protect the classified uses. Implementing this suggestion may require significant resources that are not currently available within the Department.

2. Requests that the Department develop scientifically based designated uses and water quality standards for ephemeral streams and include them with R. 61-68. Until the uses and standards are included in the regulation, they ask that discharges into ephemeral stream include only monitoring and reporting requirements for all but conventional pollutants.

Response: Intermittent and ephemeral streams are waters of the State and currently have water quality standards. These water quality standards are protective and maintain the water quality for not only the ephemeral and intermittent streams, but also the downstream uses of the larger waters into which they flow. Allowing dischargers to ephemeral streams to only monitor and report for certain pollutants would not be protective of the ephemeral stream or the downstream uses of the larger waters into which they flow.

3. Asks that the standards for iron and manganese be removed from R. 61-68. The commenter states that both manganese and iron are naturally occurring, often at concentrations above the standard.

Response: Manganese and iron are non-priority pollutants and the Department is reviewing the scientific basis for these standards and considering this request.

4. Asks the Department to remove the nitrate human health value of 10 mg/l from the water and organism consumption column of the standards and return it to the MCL column.

Response: The change requested by the commenter would not change NPDES permit limits for* nitrates due to the existing MCL value in place*. Please provide more information on why this change is requested.

5. Asks that language be changed/added such that site specific water quality standards that are developed for perennial streams automatically be applied to all ephemeral and intermittent streams that are tributary to them until such time as SCDHEC develops water quality standards for ephemeral and intermittent streams.

<u>Response</u>: The standards currently allow for ephemeral streams to be included in the development of site-specific standards as long as the ephemeral stream is included in the scope of the site-specific study. The site-specific standard cannot include areas that are outside the scope of the study.

6. Consider the information available for updating the copper criteria utilizing the Biotic Ligand Model as opposed to the hardness-dependent criteria.

<u>Response</u>: See response to Progress Energy.

SC Department of Natural Resources

1. Recommends an addition to Section E.17 stating, "spatial distribution of samples in all surface waters shall include surface, mid-depth, and bottom water samples that are representative of conditions throughout the water column."

<u>Response:</u> Section E.17 (a) states that "surface and ground water samples shall be collected so as to permit a realistic appraisal of quality and actual or potential damage to existing or classified water uses." This section further states, "For surface waters, time of day, flow, surface area and depth shall be considered." The Department currently utilizes its resources to assess different habitats as each situation warrants. The Department can profile individual monitoring locations based on the need for such data. This suggested change to the standards would require significant resources that are not currently available within the Department.

2. Recommends clarification of the dissolved oxygen standard as it applies to lakes and reservoirs. Recommends that the definitions of "surface" water in lakes and reservoirs include the entire surface layer of water (epilimnion).

<u>Response</u>: This appears to be more of a monitoring issue than a standards issue. The comment will be referred to the Monitoring Committee.

3. Recommends several surface waters be changed from the FW classification to the ORW classification due to the presence of high quality habitat and/or diverse aquatic fauna.

<u>Response</u>: The Department requests data to support these classification changes.

4. Also recommends that Back Swamp and Obed Creek be added to the Water Classifications with the proposed classification of ORW.

<u>Response</u>: The Department requests data to support these classification changes.

SC Chamber of Commerce

1. Requests that the definition of ephemeral stream be refined to enable better identification through the use of biological indicators. Suggests the Department use scientifically defensible biological data for the development of the indicators.

2. Requests that the Department develpe scientifically-based designated uses and water quality standards for ephemeral streams and include them with R. 61-68. Until the uses and standards are included in the regulation, they ask that discharges into ephemeral stream include only monitor and report requirements for all but conventional pollutants.

3. Consider the information available for updating the copper criteria utilizing the Biotic Ligand Model as opposed to the hardness-dependent criteria.

Response: See responses to WSRC comments.

SCANA

1. Provided information on the areas of the regulation that relate to source water protection and implementation. Requests that source water protection reference in Section E.14.c (5) of the regulation be deleted unless and until a comprehensive regulation for source water protection, developed in a manner consistent with the SC Administrative Procedures Act, is written.

Response: The Department will soon be issuing a new Notice of Drafting that will address Source Water Protection clarifications to the existing regulation language.

2. States that the language in Section D.2.b was "mistakenly" changed in 2001 from "economically and technologically reasonable" to " economically or technologically reasonable." Request that the language be changed back to its original intent.

Response: The Department reviewed this comment and finds the language is correct as it is currently written. The current language is what was proposed to the DHEC Board on 12/14/2000 and reflects the Department's intent for each section of the standard.

3. Makes recommendations to language in R 61-9 (Water Pollution Control Permits) that should be included in R.61-68 concerning instream dilution.

***Response*: The Department notes the receipt of this comment and if a change is warranted it may be more appropriate to do so in R. 61-9.**

SC Manufacturers Alliance:

1. Requests that the definition of ephemeral stream be refined to enable better identification through the use of biological indicators. Suggests the Department use scientifically defensible biological data for the development of the indicators.

Response: See response to WSRC.

2. Requests that the Department develop scientifically based designated uses and water quality standards for ephemeral streams and include them with R. 61-68. Until the uses and standards are included in the regulation, they ask that discharges into ephemeral stream include only monitor and report requirements for all but conventional pollutants.

Response: See response to WSRC.

3. States that source water protection standard provisions are being revised by the Department and that SCMA would like to see a reasonable definition of source water protection area.

Response: See response to SCANA.

4. Asks the Department to reconsider the working or Section E.14.c (5) and how it determines reasonable potential to impact a drinking source.

Response: The Department will soon be issuing a new Notice of Drafting that will address Source Water Protection clarifications to the existing regulation language.

NOAA – Mr. Prescott Brownell

1. Provides technical information on the work of the NOAA Fisheries Service on the restoration of diadromous fishery resources in South Carolina. States that an issue to be addressed is dissolved oxygen for sensitive life stages of diadromous fishes, especially shortnosed sturgeon. States that dissolved oxygen levels for survival, protection and recovery of shortnose sturgeon should be kept at or above 5 mg/l in any waters potentially harboring this species, and that many river reaches at and above estuarine waters fall below 4 mg/l.

Response: The Department would like additional information on what specific river reaches to which the commenter is referring.